

Applicants: Leslie Lobel and Joyce Lustbader  
Serial No.: 09/804,626  
Filed : March 9, 2001  
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**REMARKS**

Claims 1, 2, 4, 7, 16, 18 and 24-26 are pending in the subject application. No claims have been added, canceled or amended herein. Accordingly, claims 1, 2, 4, 7, 16, 18 and 24-26 will remain pending and under examination upon consideration of this Communication.

In view of the arguments set forth below, applicants maintain that the Examiner's rejections made in the April 19, 2005 Office Action have been overcome, and respectfully request that the Examiner reconsider and withdraw same.

**Rejection under 35 U.S.C. §103(a)**

The Examiner rejected claims 1, 2, 4, 7, 16, 18 and 24-26 under 35 U.S.C. §103(a) as allegedly obvious over Hsueh et al. U.S. 5,925,549 ("Hsueh") in view of McCoy et al. U.S. 5,270,181 ("McCoy").

In response to the Examiner's rejection, applicants respectfully traverse for the reasons of record and the additional reasons set forth below.

Claim 1 provides a nucleic acid which encodes a soluble polypeptide which comprises an extracellular domain of a gonadotropin receptor and thioredoxin, wherein the soluble polypeptide is capable of binding to gonadotropin. Claim 2 provides a nucleic acid which encodes a soluble polypeptide which comprises an extracellular domain of a gonadotropin receptor and a peptide segment comprising consecutive

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histidine residues, wherein the soluble polypeptide is capable of binding to gonadotropin. Claims 4, 7, 16, 18 and 24-26 depend, either directly or indirectly, from claims 1 and 2.

Hsueh teaches a fusion protein comprising the extracellular domain of, e.g., the LH receptor, wherein the extracellular domain of the receptor is linked to a transmembrane anchor protein.

McCoy teaches that heterologous genes encoding small peptides may be expressed in bacteria as fusion proteins comprising a "thioredoxin-like" protein, which fusion proteins are both soluble and stable relative to the peptides alone.

To establish a *prima facie* case of obviousness, the Examiner must demonstrate three things with respect to each claim. First, the cited references, when combined, teach or suggest every element of the claims. Second, one of ordinary skill, would have been motivated to combine the teachings of the cited references at the time of the invention. And third, there would have been a reasonable expectation that the claimed invention would succeed.

Applicants maintain that the cited references fail to support a *prima facie* case of obviousness because Hsueh and McCoy, when combined, fail to teach or suggest each and every element of the claims. Specifically, neither Hsueh nor McCoy teaches or suggests the element of a soluble polypeptide which is *capable of binding to gonadotropin* as recited in both claims 1 and 2. Dependent claims 4, 7, 16, 18 and 24-26 are also not obviated for this reason. Thus, these two references, when

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combined, do not teach all elements of the claims, and thus fail to render those claims obvious. Likewise, the cited references, when combined, fail to provide a motive to combine or a reasonable expectation of success.

In view of the above remarks, applicants maintain that claims 1, 2, 4, 7, 16, 18 and 24-26 satisfy the requirements of §103(a).

#### **Summary**

Applicants maintain that the claims pending are in condition for allowance. Accordingly, allowance is respectfully requested.

If a telephone conference would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

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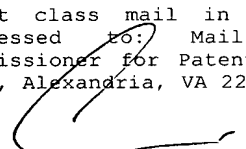
No fee is deemed necessary in connection with the filing of this Communication. However, if any fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

  
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7/19/05  
Date